

## VEHICLE ANTI-THEFT KEY WITH TRANSPONDER

### ABSTRACT

The design of a vehicle anti-theft key with transponder enhances manufacturability and protects the transponder from damage due to mechanical shock. The key includes a shank, a transponder, a shuttle, and a head. A transponder recess formed in the shuttle is sized to tightly receive the transponder, and a shank recess formed in the shuttle is  
5 configured to receive one end of the key shank. The key is assembled by inserting the transponder in the transponder recess and the key shank in the shank recess. A key head is then positioned about the shuttle, transponder, and shank end, preferably by means of a polymeric molding process. The transponder recess and shank recess are configured to ensure proper positioning of the transponder and key shank in their respective recesses.

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